UNITED STATES DISTRICT COURT DISTRICT OF MINNESOTA

Global Traffic Technologies, LLC,

Plaintiff,

JURY INSTRUCTIONS Civil No. 10-2010 ADM/JJG

v.

KM Enterprises, Inc., Rodney K. Morgan, and STC, Inc.,

Defendants.

Chad Drown, Esq., James Poradek, Esq., Timothy E. Grimsrud, Esq., Luke Tomsich, Esq., Timothy Sullivan, Esq., and Lauren J. Frank, Esq., Faegre Baker Daniels LLP, Minneapolis, MN, on behalf of Global Traffic Technologies, LLC.

Jonathan D. Jay, Esq., Terrance C. Newby, Esq., and Elizabeth L. Taylor, Esq., Leffert Jay & Polglaze, P.A., Minneapolis, MN, on behalf of KM Enterprises, Inc., STC, Inc., and Rodney Morgan.

Date submitted to jury: September 19, 2013

Members of the jury, the instructions I gave at the beginning of the trial and during the trial are still in effect. Now I am going to give you some additional instructions.

You have to follow all of my instructions – the ones I gave you earlier, as well as those I give you now. Do not single out some instructions and ignore others, because they are all important.

You will have copies of some of the instructions with you in the jury room; others you will not have copies of. This does not mean some instructions are more important than others.

Remember, you have to follow all instructions, no matter when I give them, whether or not you have written copies.

Now that you have heard the evidence and the argument, it becomes my duty to give you the instructions of the Court as to the law applicable to this case.

It is your duty as jurors to follow the law as I shall state it to you, and to apply that law to the facts as you find them from the evidence in the case. You are not to single out one instruction alone as stating the law, but must consider the instructions as a whole. Neither are you to be concerned with the wisdom of any rule of law stated by me.

Counsel have quite properly referred to some of the governing rules of law in their arguments. If, however, any difference appears to you between the law as stated by counsel and that stated by the Court in these instructions, you are of course to be governed by the Court's instructions.

Nothing I say in these instructions is to be taken as an indication that I have any opinion about the facts of the case, or what that opinion is. It is not my function to determine the facts, but rather yours.

You must perform your duties as jurors without bias or prejudice as to any party. The law does not permit you to be governed by sympathy, prejudice or public opinion. All parties expect that you will carefully and impartially consider all of the evidence, follow the law as it is now being given to you, and reach a just verdict, regardless of the consequences.

You have been allowed to take notes during the course of the trial, and you may take these notes with you to the jury room. You should not consider these notes binding or conclusive, whether they are your notes or those of another juror. The notes should be used as an aid to your memory and not as a substitute for it. You should not give greater weight to a particular bit of evidence solely because it has been reduced to writing. I want to make clear to you that it is your recollection of the evidence which should control, and you should disregard anything contrary to your own recollection which may appear from your own notes or those of another juror.

You are to consider only the evidence in the case. But in your consideration of the evidence you are not limited to the bald statements of the witnesses. In other words, you are not limited to what you see and hear as the witnesses testify. You are permitted to draw, from the facts which you find have been proved, such reasonable inferences as seem justified in light of your experience.

"Inferences" are deductions or conclusions which reason and common sense lead you to draw from facts that have been established by the evidence in the case.

You will make your decision based on what you recall of the evidence. You will not have a written transcript to consult.

There are, generally speaking, two types of evidence from which a jury may properly find the truth as to the facts of a case. One is direct evidence - such as the testimony of any eyewitness. The other is indirect or circumstantial evidence - the proof of a chain of circumstances pointing to the existence or non-existence of certain facts.

As a general rule, the law makes no distinction between direct or circumstantial evidence, but simply requires that the jury find the facts in accordance with the greater weight of all the evidence in the case, both direct and circumstantial.

Once again, "evidence" includes the testimony of witnesses; documents and other things received as exhibits; any facts that have been stipulated--that is, formally agreed to by the parties. Certain things are not evidence.

- (1) Statements, arguments, questions and comments by lawyers are not evidence.
- (2) Exhibits that were identified by a party but were not offered or received in evidence are not evidence.
- (3) Objections are not evidence. Lawyers have a right and sometimes an obligation to object when they believe something is improper. If I sustained an objection to a question or an exhibit, you must ignore the question or the exhibit and must not try to guess what the information might have been.
- (4) Testimony and exhibits that I struck from the record, or told you to disregard, are not evidence and must not be considered.
- (5) Anything you saw or heard about this case outside the courtroom is not evidence.

The rules of evidence ordinarily do not permit witnesses to testify as to opinions or conclusions. An exception to this rule exists as to those whom we call "expert witnesses." Witnesses who, by education and experience, have become expert in some art, science, profession, or calling, may state their opinions as to relevant and material matters, in which they profess to be expert, and may also state their reasons for the opinion.

You should consider each expert opinion received in evidence in this case, and give it such weight as you may think it deserves. If you should decide that the opinion of an expert witness is not based upon sufficient education and experience, or if you should conclude that the reasons given in support of the opinion are not sound, or if you feel that it is outweighed by other evidence, you may disregard the opinion entirely.

In deciding what the facts are, you may have to decide what testimony you believe and what testimony you do not believe. You may believe all of what a witness said, or only part of it, or none of it.

In deciding what testimony to believe, you may consider the witness's intelligence, the opportunity the witness had to have seen or heard the things testified about, the witness's memory, any motives that witness may have for testifying a certain way, the manner of the witness while testifying, whether that witness said something different at an earlier time, the general reasonableness of the testimony, and the extent to which the testimony is consistent with any evidence that you believe.

In deciding whether or not to believe a witness, keep in mind that people sometimes hear or see things differently and sometimes forget things. You need to consider therefore whether a contradiction is an innocent misrecollection or lapse of memory or an intentional falsehood, and that may depend on whether it has to do with an important fact or only a small detail.

During the trial of this case, certain testimony has been presented to you by way of deposition, consisting of sworn recorded answers to questions asked of the witness in advance of the trial by one or more of the attorneys for the parties to the case. The testimony of a witness who, for some reason, cannot be present to testify from the witness stand may be presented in writing under oath or on a video recording. Such testimony is entitled to the same consideration, and is to be judged as to credibility, and weighted, and otherwise considered by the jury, in so far as possible, in the same way as if the witness had been present, and had testified from the witness stand.

A witness may be discredited or impeached by contradictory evidence; or by evidence that at some other time the witness has said or done something, or has failed to say or do something which is inconsistent with the witness's present testimony.

If you believe any witness has been impeached and thus discredited, it is your exclusive province to give the testimony of that witness such credibility, if any, as you may think it deserves.

If a witness is shown knowingly to have testified falsely concerning any material matter, you have a right to distrust such witness's testimony in other particulars; and you may reject all the testimony of that witness or give it such credibility as you may think it deserves.

A witness can be said to have knowingly testified falsely if you are presuaded that the witness understood that the testimony given was false and did not misstate or omit something because of mistake or accident or other innocent reasons.

As I did at the start of the case, I will first give you a brief summary of each side's contentions. I will then provide you with detailed instructions on what each side must prove to prevail on each of its contentions.

As you know, GTT, the patent holder and Plaintiff in this case, contends that Defendants infringed its '398 Patent by making, using, selling and installing traffic control management systems, namely the Emtrac Priority Control System, in violation of GTT's rights under its patent.

Defendants deny that the Emtrac Priority Control System infringes GTT's '398 Patent, and they seek a judgment of non-infringement and invalidity.

Your job is to decide whether Defendants infringed the asserted claims of the '398 Patent and whether any of the asserted claims of that patent are invalid. If you decide that one or more of the claims of the '398 Patent has been infringed and is not invalid, you will then need to decide any money damages to be awarded to GTT to compensate it for the infringement. You will also need to make a finding as to whether the infringement was willful. If you decide that there was infringement and that the infringement was willful, that decision should not affect any damages award you make. It will be my duty to take willfulness into account at a later time.

There are two standards of proof that you will apply to the evidence, depending on the issue you are deciding. On some issues, you must decide whether certain facts have been proven by a greater weight of the evidence. A greater weight of the evidence means that the fact that is to be proven is more likely true than not; that is, the evidence in favor of that fact being true is sufficient to tip the scale, even if slightly, in its favor. On other issues that I will identify for you, you must use a higher standard and decide whether the fact has been proven by clear and convincing evidence; that is, you have been left with a clear conviction that the fact has been proven.

You have probably heard of the phrase "proof beyond a reasonable doubt." That is a stricter standard which applies in criminal cases. It does not apply in civil cases such as this. You should, therefore, put it out of your minds.

On a scale of these various standards of proof, as you move from greater weight of the evidence, where the proof need only be sufficient to tip the scale in favor of the party proving the fact, to beyond a reasonable doubt, where the fact must be proven to a very high degree of certainty, you may think of clear and convincing evidence as being between the two standards.

To prove infringement of any claim, GTT must persuade you by a greater weight of the evidence, i.e., that it is more likely than not, that Defendants have infringed that claim. To persuade you that any infringement was willful, GTT must prove that the infringement was willful by clear and convincing evidence.

Before you can decide many of the issues in this case, you will need to understand the role of patent "claims." The patent claims are the numbered sentences at the end of each patent. The claims are important because it is the words of the claims that define what a patent covers. The figures and text in the rest of the patent provide a description and/or examples of the invention and provide a context for the claims, but it is the claims that define the breadth of the patent's coverage. Each claim is effectively treated as if it were a separate patent, and each claim may cover more or less than another claim. Therefore, what a patent covers depends, in turn, on what each of its claims covers.

You will first need to understand what each claim covers in order to decide whether or not there is infringement of the claim and to decide whether or not the claim is invalid. The law says that it is my role to define the terms of the claims and it is your role to apply my definitions to the issues that you are asked to decide in this case. Therefore, as I explained to you at the start of the case, I have determined the meaning of the claims and I will provide to you my definitions of certain claim terms. You must accept my definitions of these words in the claims as being correct. It is your job to take these definitions and apply them to the issues that you are deciding, including the issues of infringement and validity.

I will now explain how a claim defines what it covers.

A claim sets forth, in words, a set of requirements. Each claim sets forth its requirements in a single sentence. If a device or a method satisfies each of these requirements, then it is covered by the claim.

There can be several claims in a patent. Each claim may be narrower or broader than another claim by setting forth more or fewer requirements. The coverage of a patent is assessed claim-by-claim. In patent law, the requirements of a claim are often referred to as "claim elements" or "claim limitations." When a thing (such as a product or a process) meets all of the requirements of a claim, the claim is said to "cover" that thing, and that thing is said to "fall" within the scope of that claim. In other words, a claim covers a product or process where each of the claim elements or limitations is present in that product or process.

Sometimes the words in a patent claim are difficult to understand, and therefore it is difficult to understand what requirements these words impose. It is my job to explain to you the meaning of the words in the claims and the requirements these words impose.

As I just instructed you, there are certain specific terms that I have defined and you are to apply the definitions that I provide to you.

By understanding the meaning of the words in a claim and by understanding that the words in a claim set forth the requirements that a product or process must meet in order to be covered by that claim, you will be able to understand the scope of coverage for each claim.

Once you understand what each claim covers, then you are prepared to decide the issues that you will be asked to decide, such as infringement and invalidity.

This case involves two types of patent claims: independent claims and dependent claims.

An "independent claim" sets forth all of the requirements that must be met in order to be covered by that claim. Thus, it is not necessary to look at any other claim to determine what an independent claim covers. In this case, claims 1 and 16 of the '398 patent are each independent claims.

The remainder of the Asserted Claims, Claims 3, 8, 10, and 17, in the '398 patent are "dependent claims." A dependent claim does not itself recite all of the requirements of the claim but refers to another claim for some of its requirements. In this way, the claim "depends" on another claim. A dependent claim incorporates all of the requirements of the claim(s) to which it refers. The dependent claim then adds its own additional requirements. To determine what a dependent claim covers, it is necessary to look at both the dependent claim and any other claim(s) to which it refers. A product or process that meets all of the requirements of both the dependent claim and the claim(s) to which it refers is covered by that dependent claim.

I will now explain to you the meaning of some of the words of the claims in this case. In doing so, I will explain some of the requirements of the claims. As I have previously instructed you, you must accept my definition of these words in the claims as correct. For any words in the claim for which I have not provided you with a definition, you should apply their plain and ordinary meaning. You should not take my definition of the language of the claims as an indication that I have a view regarding how you should decide the issues that you are being asked to decide, such as infringement and invalidity. These issues are yours to decide.

Claim 1: The term "mapping means, associated with the location, for storing a plurality of positions corresponding to allowed approaches to the location and providing therefrom a map of allowed approaches" is in a means-plus-function form. The function is: "storing a plurality of positions corresponding to allowed approaches to the location and providing therefrom a map of allowed approaches." The structure or "mapping means" for performing the function is construed as "computer map memory."

The claims neither specify nor require physical connection or location within the definition of 'associate' in the Asserted Claims.

You should give the rest of the words in the claims their plain and ordinary meaning as the word would be understood by a person of ordinary skill in the art in question at the time of the invention.

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In deciding what the level of ordinary skill in the field of the invention is, you should consider all the evidence introduced at trial, including but not limited to: (1) the levels of education and experience of the inventor and other persons actively working in the field; (2) the types of problems encountered in the field; (3) prior art solutions to those problems; (4) the rapidity with which innovations are made; and (5) the sophistication of the technology.

I will now instruct you how to decide whether or not Defendants have infringed the '398 patent. Infringement is assessed on a claim-by-claim basis. Therefore, there may be infringement as to one claim but no infringement as to another.

In this case, there are three possible ways that a claim may be infringed. The three types of infringement are called: (1) direct infringement; (2) active inducement; and (3) contributory infringement. Active inducement and contributory infringement are referred to as indirect infringement. There cannot be indirect infringement without someone else engaging in direct infringement. To prove indirect infringement, GTT must also prove that a defendant's indirect infringement caused direct infringement.

In this case, GTT has alleged that Defendants directly infringe the '398 patent. In addition, GTT has alleged that one or more of the Defendants are liable for actively inducing and/or contributing to the direct infringement of another entity.

In order to prove infringement, GTT must prove that the requirements for one or more of these types of infringement are met by a greater weight of the evidence, i.e., that it is more likely than not that all of the requirements of one or more of each of these types of infringement have been proved.

I will now explain each of these types of infringement in more detail.

There are two types of "direct infringement": (1) "literal infringement" and (2) "infringement under the doctrine of equivalents." In order to prove direct infringement by literal infringement, GTT must prove by a greater weight of the evidence, i.e., that it is more likely than not, that one or more Defendants made, used, sold, or offered for sale within the United States a product or process that meets all of the requirements of a claim of the '398 patent. You must compare the product or process with each and every one of the disputed requirements of a claim to determine whether all of the requirements of that claim are met.

You must determine, separately for each asserted claim, whether or not there is infringement. There is one exception to this rule. If you find that an independent claim on which other claims depend is not infringed, there cannot be infringement of any dependent claim that refers directly or indirectly to that independent claim. On the other hand, if you find that an independent claim has been infringed, you must still decide, separately, whether the product or process meets additional requirements of any claims that depend on the independent claim, thus, whether any or all of those dependent claims have also been infringed. A dependent claim includes all the requirements of any of the claims to which it refers plus additional requirements of its own.

You have heard evidence about both GTT's commercial product and method, known as Opticom and Defendants' accused product and method, known as the Emtrac GPS System.

However, in deciding the issue of infringement you may not compare the Emtrac GPS System to GTT's Opticom product. Rather, you must compare the Emtrac GPS System to the claims of the '398 patent when making your decision regarding infringement.

Whether or not Defendants knew its product or method infringed or even knew of the '398 patent does not matter in determining direct infringement.

The Emtrac GPS System should be compared to the invention described in each patent claim it is alleged to infringe, not to GTT's preferred or commercial embodiment of the claimed invention.

Claim 1 of the Asserted Claims includes a requirement that is in means-plus-function form. When a claim requirement is in means-plus-function form, it covers the structure described in the patent specification for performing the function stated in the claim, and also any structure "equivalent" to the described structure.

A product meets a means-plus-function requirement of a claim if: (1) it has a structure that performs the identical function recited in the claim, and (2) that structure is either identical or "equivalent" to the described structure that I defined earlier as performing the function.

If the Emtrac GPS System does not perform the specific function recited in the claim, the "means-plus-function" requirement is not met, and the Emtrac GPS System does not literally infringe the claim. Alternatively, even if the Emtrac GPS System has a structure that performs the function recited in the claim but the structure is not either identical or "equivalent" to the structure that I defined to you as being described in the '398 patent and performing this function, the Emtrac GPS System does not literally infringe the asserted claim.

A structure may be found to be "equivalent" to the structure I have defined as being described in the '398 patent if a person having ordinary skill in the field of technology of the '398 patent either would have considered the differences between them to be insubstantial at the time the '398 patent issued or if that person would have found the structure performed the function in substantially the same way to accomplish substantially the same result. In deciding whether the differences would be "insubstantial," you may consider whether a person having an ordinary level of skill in the field of technology of the patent would have known of the interchangeability of the two structures or sets of structures. Interchangeability itself is not

sufficient; in order for the structures to be considered to be interchangeable, the interchangeability of the two structures must have been known to persons of ordinary skill in that art at the time the patent issued. The fact that a structure is known now and is "equivalent" is not enough. The structure must also have been available at the time the '398 patent issued.

If a person or company makes, uses, sells, or offers to sell within the United States a product or process that does not meet all of the requirements of a claim and thus does not literally infringe that claim, there can still be direct infringement if that product or process satisfies that claim under the "doctrine of equivalents."

Under the doctrine of equivalents, a product or process infringes a claim if the accused product or process contains elements or performs steps corresponding to each and every requirement of the claim that is equivalent to, even though not literally met by, the accused product or process. You may find that an element or step is equivalent to a requirement of a claim that is not met literally if a person having ordinary skill in the field of technology of the patent would have considered the differences between them to be "insubstantial" or would have found that the structure or action: (1) performs substantially the same function and (2) works in substantially the same way (3) to achieve substantially the same result as the requirement of the claim. In order for the structure or action to be considered interchangeable, the structure or action must have been known at the time of the alleged infringement to a person having ordinary skill in the field of technology of the patent. Interchangeability at the present time is not sufficient. In order to prove infringement by "equivalents," GTT must prove the equivalency of the structure or actions to a claim element by a greater weight of the evidence.

When the claim requirement that is not met by the product is a "means-plus-function" requirement, and if you determined that there is no "literal infringement" because there is no structure in the accused product that performs the specific function of the means-plus-function requirement, you may decide that the structure nonetheless corresponds to the requirements of

the claim under the doctrine of equivalents if it performs an "equivalent" function and has an "equivalent" structure.

On the other hand, if you find that the accused product has no corresponding structure to the structure that I defined as performing that function, then you must find that there is no infringement under the doctrine of equivalents. This is the case even if you find that the accused product has some other structure that performs the specific function of the means-plus-function requirement. In other words, for a means-plus-function requirement, a determination that there is no "equivalent" structure for purposes of "literal infringement" precludes you from finding infringement under the "doctrine of equivalents."

GTT alleges that each Defendant is liable for infringement by actively inducing another to directly infringe the '398 patent literally or under the doctrine of equivalents. As with direct infringement, you must determine whether there has been active inducement on a claim-by-claim basis.

A defendant is liable for active inducement of a claim only if GTT proves by a greater weight of the evidence that:

- the acts are actually carried out by another and directly infringe an Asserted
 Claim;
- (2) the particular defendant took action during the time the '398 patent was in force intending to cause the infringing acts by another; and
- (3) the particular defendant was aware of the '398 patent and knew that the acts, if taken, would constitute infringement of that patent, or, the particular defendant believed there was a high probability that the acts, if taken, would constitute infringement of the '398 patent but deliberately avoided confirming that belief.

In order to establish active inducement of infringement, it is not sufficient that the particular defendant itself directly infringes the claim. Nor is it sufficient that the particular defendant was aware of the act(s) by another that allegedly constitute the direct infringement. Rather, you must find that the particular defendant knew that the acts it induced its customers to take constituted infringement of the '398 patent or that the particular defendant believed there was a high probability that another would infringe the '398 patent, but remained willfully blind to the infringing nature of the other entity's acts, in order to find inducement of infringement.

In order to establish active inducement of infringement, direct evidence of intent or knowledge is not required; rather, circumstantial evidence of intent or knowledge is sufficient. For example, when a manufacturer who has knowledge of a patent sells a product that can only be used to infringe the patent, you may infer that infringement is intended. Likewise, offering to sell or selling a product with the object of promoting its use to infringe, advertising an infringing use, or instructing how to engage in an infringing use, are all examples of evidence that may show an affirmative intent that the product be used to infringe. Finally, knowledge that the induced acts constitute infringement may be inferred where, for example, a defendant had both knowledge of the patent and specific intent to cause acts that constitute direct infringement.

GTT also argues that Defendants have contributed to infringement by another.

Contributory infringement may arise when someone supplies something that is used to infringe one or more of the patent claims.

In order for there to be contributory infringement by Defendants, someone other than Defendants must directly infringe an Asserted Claim of the '398 patent; if there is no direct infringement by anyone, there can be no contributory infringement.

If you find someone has directly infringed the '398 patent, then contributory infringement exists if:

- (1) Defendants supplied an important component of the infringing part of the product or method;
 - (2) The component is not a common component suitable for non-infringing use; and
- (3) Defendants supplied the component with the knowledge of the '398 patent and knowledge that the component was especially made or adapted for use in an infringing manner.

A "common component suitable for non-infringing use" is a component that has uses other than as a component of the patented product or patented method, and those other uses are not occasional, farfetched, impractical, experimental, or hypothetical.

In this case, GTT argues that Defendants KM Enterprises, Inc., STC, Inc., and Rodney "Kris" Morgan infringed and, further, that each of those Defendants infringed willfully. If you have decided that one or more of the Defendants have infringed, you must go on and address the additional issue of whether or not this infringement was willful with respect to each Defendant. Willfulness requires you to determine by clear and convincing evidence that the particular Defendant acted recklessly.

To prove that a particular Defendant acted recklessly, GTT must prove two things by clear and convincing evidence. The first part of the test is objective: GTT must persuade you that the individual Defendant acted despite a high likelihood that its actions infringed a valid and enforceable patent. In making this determination, you may not consider the Defendant's state of mind. Legitimate or credible defenses to infringement, even if not ultimately successful, demonstrate a lack of recklessness.

Only if you conclude that the Defendant's conduct was reckless do you need to consider the second part of the test. The second part of the test does depend on the state of mind of the particular Defendant. GTT must persuade you that the particular Defendant actually knew or should have known that its actions constituted an unjustifiably high risk of infringement of a valid and enforceable patent. To determine whether the particular Defendant had this state of mind, consider all the facts which may include, but are not limited, to:

- (1) Whether or not one or more Defendants acted in accordance with the standards of commerce for its industry;
- (2) Whether or not one or more Defendants intentionally copied a product of GTT

- that is covered by the '398 patent;
- (3) Whether or not there is a reasonable basis to believe that one or more Defendants did not infringe or had a reasonable defense to infringement;
- (4) Whether or not one or more Defendants made a good-faith effort to avoid infringing the '398 patent, for example, whether one or more Defendants attempted to design around the '398 patent;
- (5) Whether or not one or more Defendants tried to cover up its infringement; and,
- (6) Whether or not one or more Defendants sought legal advice for the purpose of determining whether it was infringing GTT's patent. You may not assume that merely because a party did not obtain an opinion of counsel, the opinion would have been unfavorable. However, you may consider the fact that none of the Defendants sought a legal opinion as one factor in assessing whether, under the totality of the circumstances, any infringement by a particular Defendant was willful.

I will now instruct you on the rules you must follow in deciding whether or not Defendants have proven that claims 1, 3, 8, 10, 16, and 17 of the '398 patent are invalid. To prove that any claim of a patent is invalid, Defendants must persuade you by clear and convincing evidence, i.e., you must be left with a clear conviction that the claim is invalid.

Under the patent laws, a person is entitled to a patent only if the invention claimed in the patent is new and non-obvious in light of what came before. That which came before is referred to as the "prior art."

Defendants are relying on various items that it believes constitute prior art.

Defendants must prove by clear and convincing evidence that these items are prior art. In order to do so, Defendants must prove that the items fall within one or more of the different categories of prior art recognized by the patent laws. These categories include:

First, anything that was publicly known or publicly used in the United States by someone other than the inventors before the date of the invention of the '398 patent.

Second, anything that was patented or described in a printed publication anywhere in the world before the date of the invention of the '398 patent, or more than one year before January 7, 1994.

Third, anything that was invented by another person in the United States before the date of the invention of the '398 patent, if the other person did not abandon, suppress or conceal his or her prior invention.

In this case, you must determine the date of the invention of the '398 patent.

The date of invention is either when the invention was reduced to practice, or, when it was conceived, provided the inventors were diligent in reducing the invention to practice.

Diligence means working continuously, though not necessarily every day.

Conception is the mental part of an inventive act, i.e., the formation in the mind of the inventor of a definite and permanent idea of the complete and operative invention as it is thereafter to be applied in practice, even if the inventor did not know at the time that the invention would work. Conception of an invention is complete when the idea is so clearly defined in the inventor's mind that, if the idea were communicated to a person having ordinary skill in the field of the technology, he or she would be able to reduce the invention to practice without undue research or experimentation. This requirement does not mean that the inventor has to have a prototype built, or actually explained her or his invention to another person. But, there must be some evidence beyond the inventor's own testimony that confirms the date on which the inventor had the complete idea. Conception may be proven when the invention is shown in its complete form by drawings, disclosure to another person, or other forms of evidence presented at trial.

A claimed invention is "reduced to practice" when it has been constructed, used, or tested sufficiently to show that it will work for its intended purpose, or, when the inventor files a patent application. An invention may also be reduced to practice even if the inventor has not made or tested a prototype of the invention if it has been fully described in a filed patent application.

I will now give you more detail regarding the categories of prior art.

Knowledge or use in the United States of a patented invention can be prior art to the patent claims. The knowledge or use will be prior art if Defendants prove by clear and convincing evidence the following:

First, the knowledge or use must be by someone other than the inventors.

Second, the knowledge or use must be before the inventors' date of invention.

Third, the knowledge or use must be in the United States. Prior knowledge or use outside the United States cannot be relied upon to invalidate a patent claim.

Fourth, the knowledge or use must have been publicly accessible. Private or secret knowledge or use by someone other than the inventors is not prior art. And Defendants must prove that the alleged knowledge or use was publicly accessible on a non-confidential basis.

Finally, Defendants may not rely on oral testimony alone to establish that an item was publicly accessible on a non-confidential basis or to establish the date of the alleged prior knowledge or use. Rather, oral testimony must be corroborated by documents or other evidence.

Defendants must introduce clear and convincing evidence to prove a reference qualifies as prior art based on prior public knowledge or public use.

Printed publications from anywhere in the world are prior art if the printed publications were published, either before the date of the invention of the '398 patent or more than one year before January 7, 1994.

A document is a printed publication if it has been disseminated or otherwise made available to the public to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, could have located it and recognized and comprehended therefrom the essentials of the claimed invention without need of further research or experimentation.

The date that a printed publication becomes prior art is the date that it becomes available to the relevant public on a non-confidential basis. Published patent applications are printed publications as of their publication dates.

A defendant may not rely on oral testimony alone to establish that an item was reasonably accessible to or distributed to the public or to establish the date of publication of a particular reference. Rather, oral testimony must be corroborated by documents or other evidence.

Defendants must introduce clear and convincing evidence to prove a reference qualifies as prior art based on a printed publication.

An invention made by another person before the date of the invention of the '398 patent is prior art to the patent claim, unless that other person abandoned, suppressed or concealed his or her invention.

I have previously given you an instruction on how to determine the date of invention of the '398 patent. I will now give you an instruction on how to determine whether another person made an invention before the date of invention of the '398 patent.

As a general rule, the first person to reduce an invention to practice is said to be the first inventor. As I have explained, a claimed invention is "reduced to practice" when either it has been constructed, used, or tested sufficiently to show that it will work for its intended purpose or, in the case of the claimed invention of the '398 patent, when the inventors filed a patent application on January 7, 1994. Reduction to practice by filing a patent application does not apply to any prior invention by another or alleged prior art in this case.

Let's consider an example. Mr. Smith has a patent on a table. He reduced his table to practice on April 1. Ms. Jones invents the same table. She built her table on March 1, one month before Mr. Smith reduced his table to practice. Provided Ms. Jones did not abandon, suppress, or conceal her invention, Ms. Jones' invention of the table is prior art to Mr. Smith's patent claims because Ms. Jones reduced her table to practice one month before Mr. Smith's reduction to practice.

There is, however, an important exception to this general rule. Someone who was first to conceive of an invention but reduced it to practice after someone else will be the first inventor if he or she was the first to conceive of the invention and he or she exercised "reasonable".

diligence" in reducing the invention to practice from a time beginning just before the other person's conception.

As I have explained in Jury Instruction No. 27, conception is the mental part of an inventive act.

"Reasonable diligence" means that the inventor worked continuously on reducing the invention to practice. Interruptions necessitated by the everyday problems and obligations of the inventor or those working with him or her do not prevent a finding of diligence.

Let's change our example slightly. Mr. Smith conceived of his table on February 1 and reduced it to practice on April 1. Ms. Jones conceived of the table on January 1, one month before Mr. Smith's conception, and built it on May 1, one month after Mr. Smith's reduction to practice. If Ms. Jones was reasonably diligent in building the table from the time just before Mr. Smith's February 1 conception up to the time that she built the table on May 1, she is the first inventor of the table and her invention is prior art to Mr. Smith's patent claims provided that Ms. Jones did not abandon, suppress, or conceal her invention.

The final requirement for a prior invention to be prior art is that the prior inventor did not abandon, suppress or conceal his or her invention. Generally, an invention was not abandoned, suppressed or concealed if the invention was made public, sold or offered for sale, or otherwise used for a commercial purpose. The failure to file a patent application, to describe the invention in a published document, or to use the invention publicly, within a reasonable time after first making the invention may constitute abandonment, suppression, or concealment.

Defendants must prove by clear and convincing evidence that an alleged prior invention qualifies as prior art. The requirements to qualify an alleged prior invention as prior art must be

sufficiently corroborated by evidence other than oral testimony of witnesses.

In order for someone to be entitled to a patent, the invention must actually be "new."

The '398 patent was new if the identical product has not been made, used, or disclosed before the date of invention of the patent. Anticipation must be determined on a claim-by-claim basis.

Defendants must convince you of this by clear and convincing evidence.

In order for a patent claim to be anticipated by the prior art, each and every limitation of the claim must be present within a single item of prior art, whether that prior art is a publication, a prior patent, a prior invention, or some other item of prior art. You may not find that the prior art anticipates a patent claim by combining two or more items of prior art.

Here is a list of ways that Defendants can show that a patent claim was not new or that the patentee lost the right to patent the claims:

- (1) An invention is not new if it was known to or used by others in the United States before the date of the invention of the product or processes covered by the '398 Patent.
- (2) An invention is not new if it was already patented or described in a printed publication, anywhere in the world before the date of invention of the patented product or processes.
- (3) An invention is not new if it was described in a published patent application filed by another in the United States before the date of the patented invention.
- (4) An invention is not new if the claimed invention was described in a patent granted on an application for patent by another filed in the United States and the application was filed before the date or reduction to practice or the filing date of

- the application for the '398 Patent.
- (5) An invention is not new if the invention was made by someone else in the United States before the invention was made by the patent holder and the other person did not abandon, suppress, or conceal the invention.

Even though an invention may not have been identically disclosed or described before it was made by an inventor, in order to be patentable, the invention must also not have been obvious to a person of ordinary skill in the field of technology of the patent at the time the invention was made.

Defendants may establish that a patent claim is invalid by showing, by clear and convincing evidence, that the claimed invention would have been obvious to persons having ordinary skill in the art at the time the invention was made in the field of the patent.

In determining whether a claimed invention is obvious, you must consider the level of ordinary skill in the field of the invention that someone would have had at the time the claimed invention was made, the scope and content of the prior art, and any differences between the prior art and the claimed invention.

Keep in mind that the existence of each and every element of the claimed invention in the prior art does not necessarily prove obviousness. Most, if not all, inventions rely on building blocks of prior art. In considering whether a claimed invention is obvious, you may but are not required to find obviousness if you find that at the time of the claimed invention there was a reason that would have prompted a person having ordinary skill in the field of the invention to combine the known elements in a way the claimed invention does, taking into account such factors as: (1) whether the claimed invention was merely the predictable result of using prior art elements according to their known function(s); (2) whether the claimed invention provides an obvious solution to a known problem in the relevant field; (3) whether the prior art teaches or suggests the desirability of combining elements claimed in the invention; (4) whether the prior

art teaches away from combining elements in the claimed invention; (5) whether it would have been obvious to try the combinations of elements, such as when there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions; and (6) whether the change resulted more from design incentives or other market forces.

To find it rendered the invention obvious, you must find that the prior art provided a reasonable expectation of success. Obvious to try is not sufficient in unpredictable technologies.

In determining whether the claimed invention was obvious, consider each claim separately. Do not use hindsight. Consider only what was known at the time of the invention.

In making these assessments, you should take into account any objective evidence (sometimes called "secondary considerations") that may have existed at the time of the invention and afterwards that may shed light on the obviousness or not of the claimed invention, such as:

- a. Whether the invention was commercially successful as a result of the merits of the claimed invention (rather than the result of design needs or market-pressure advertising or similar activities);
- b. Whether the invention satisfied a long-felt need;
- c. Whether others had tried and failed to make the invention;
- d. Whether others invented the invention at roughly the same time;
- e. Whether others copied the invention;
- f. Whether there were changes or related technologies or market needs contemporaneous with the invention;
- g. Whether the invention achieved unexpected results;
- h. Whether others in the field praised the invention;

- i. Whether persons having ordinary skill in the art of the invention expressed surprise or disbelief regarding the invention;
- j. Whether others sought or obtained rights to the patent from the patent holder; and,
- k. Whether the inventor proceeded contrary to accepted wisdom in the field.

In considering whether the claimed invention was obvious, you must first determine the scope and content of the prior art.

The scope and content of prior art for deciding whether the invention was obvious includes prior art in the same field as the claimed invention, regardless of the problem addressed by the item or reference, and prior art from different fields that a person of ordinary skill in the art using common sense might combine if familiar so as to solve the problem, like fitting together the pieces of a puzzle. When a party attacking the validity of a patent relies on prior art which was specifically considered by the Examiner during the prosecution of the application leading to the issuance of the patent, that party bears the burden of overcoming the deference due a qualified government agency official presumed to have performed his or her job.

If you find that one or more Defendants infringed any valid claim of the '398 patent, you must then consider what amount of damages to award to GTT. I will now instruct you about the measure of damages. By instructing you on damages, I am not suggesting which party should win this case, on any issue.

The damages you award must be adequate to compensate GTT for the infringement. They are not meant to punish an infringer. Your damages award, if you reach this issue, should put GTT in approximately the same financial position that it would have been in had the infringement not occurred.

GTT has the burden to establish the amount of its damages by a greater weight of the evidence. In other words, you should award only those damages that GTT establishes that it more likely than not suffered.

There are two different types of damages that GTT may be entitled to recover: lost profits and a reasonable royalty. In this case, GTT seeks lost profits due to lost sales and lost profits due to price erosion. Lost profits consist of any actual reduction in business profits GTT suffered as a result of Defendants' alleged infringement. A reasonable royalty is defined as the money amount GTT and Defendants would have agreed upon as a fee for use of the invention at the time prior to when infringement began. However, GTT is not entitled to damages that are remote or speculative.

I will give more detailed instructions regarding damages shortly. Note, however, that GTT is entitled to recover no less than a reasonable royalty for each infringing sale, use, or manufacture.

The amount of damages GTT can recover is limited to those acts of infringement by Defendants that occurred after GTT gave Defendants notice that it infringed the '398 patent. Notice of infringement can be actual or constructive.

Actual notice means that GTT communicated to Defendants a specific charge of infringement of the '398 patent by the Emtrac GPS System. This notice is effective as of the date given. The filing of this lawsuit on September 30, 2010, constitutes actual notice of infringement of the '398 patent, and therefore damages in this case begin at least by September 30, 2010.

Constructive notice means that GTT complied with the marking requirement of the patent law. "Marking" means that substantially all of the products, or if reasonable under the circumstances, the packaging of the products, made, offered for sale, or sold under the '398 patent are marked to display the word 'patent' or the abbreviation 'pat.', together with the number of the patent. The purpose of the constructive notice marking requirement is to provide notice to the public that a product is covered by a patent. GTT has the burden of establishing substantial compliance with the marking requirement. To do so, GTT must show by a greater weight of the evidence that substantially all of the products, or if reasonable under the circumstances, the packaging of the products, it made, offered for sale, or sold under the '398 patent were marked.

Your job is to calculate damages from the date Defendants received either actual or constructive notice, whichever was first. You should not award damages for any infringement by Defendants occurring before it first received actual or constructive notice.

I will first instruct you about lost profits damages. Simply stated, lost profit damages are the profits GTT lost because of the infringement. They are not the profits Defendants made.

GTT says that it lost profits because Defendants' infringement took away sales that GTT would have made. This is called lost profits due to lost sales. To prove that it lost sales, GTT must prove by a greater weight of the evidence that GTT would have made additional sales if Defendants had not sold an infringing product. GTT must also prove by a greater weight of the evidence the amount of profit that GTT would have made on those lost sales.

There is not a set formula or exclusive way of proving lost profits due to lost sales.

Rather, in the end, GTT must establish causation between its lost profits and the infringement or, in other words, a reasonable probability that, but for the infringement, it would have made the sales that were made by Defendants.

One factor to consider in deciding if GTT has proven that Defendants' infringement caused GTT to lose profits is whether GTT and Defendants competed in a two-supplier market for GPS traffic preemption products. If you find that GTT has proven by a greater weight of the evidence that GTT and Defendants competed in a two-supplier market for GPS traffic preemption products, then it is reasonable to infer that GTT would have made the sales made by Defendants.

You should also consider whether GTT has proven the following factors by a greater weight of the evidence:

- (1) that there was a demand for the patented product;
- (2) that GTT had the manufacturing and marketing capacity to make the sales that

- GTT says that it would have made if Defendants had not infringed;
- (3) that there were no acceptable non-infringing substitute products or, if there were, that GTT would have made a portion of Defendants' sales despite the availability of acceptable non-infringing substitutes; and,
- (4) the amount of profit that GTT would have made but for Defendants' sales.

 I will now give you more detailed instructions on each of these factors.

Demand for the patented product can be proven by significant sales of a patent holder's patented product or significant sales of an infringing product containing the patented features.

To be an "acceptable, non-infringing substitute," a product must have the advantages of the patented invention that were important to people who purchased an alleged infringer's product. If purchasers of an alleged infringer's product were motivated to buy that product because of features available only from that product and a patent holder's patented product, then some other, alternative product is not an acceptable substitute, even if it otherwise competed with a patent holder's and an alleged infringer's products. On the other hand, if the realities of the marketplace are that competitors other than the patentee would likely have captured the sales made by the infringer, despite a difference in the products, then the patentee is not entitled to lost profits on those sales.

In considering this factor, GTT need not negate every possibility that purchasers of Defendants' products might have bought a product other than GTT's product or might have foregone the purchase altogether. And the mere existence of a competing device does not make that device an acceptable substitute. However, GTT is not entitled to damages that are remote and speculative.

An alternative product may be considered "available" as a potential substitute even if the product was not actually on sale during the infringement period. Factors suggesting the alternative was available include whether the material, experience, and know-how for the alleged substitute were readily available at the time of infringement. Factors suggesting the alternative was not available include whether the material was of such high cost as to render the alternative unavailable and whether an alleged infringer had to design or invent around the patented technology to develop an alleged substitute.

A patent holder is only entitled to lost profits for sales it could have actually made. In other words, GTT must show that it had the manufacturing and marketing capability to make the sales it said it lost. This means GTT must prove it is more probable than not that it could have made and sold, or could have had someone else make or sell for it, the additional products it says it could have sold but for the infringement.

A patent holder may calculate its lost profits on lost sales by computing the lost revenue for sales it claims it would have made but for the infringement and subtracting from that figure the amount of additional costs or expenses it would have incurred in making those lost sales, such as cost of goods, sales costs, packaging costs, and shipping costs. Certain fixed costs that do not vary with increases in production or scale, such as taxes, insurance, rent, and administrative overhead, should not be subtracted from a patent holder's lost revenue.

If a patent holder establishes it would have made some, but not all, of an alleged infringer's sales but for the infringement, the amount of sales that the patent holder lost may be shown by proving the patent holder's share of the relevant market, excluding infringing products. A patent holder may be awarded a share of profits equal to its market share even if there were noninfringing substitutes available. In determining a patent holder's market share, the market must be established first, which requires determining which products are in that market. Products are considered in the same market if they are considered "sufficiently similar" to compete against each other. Two products are sufficiently similar if one does not have a significantly higher price than, or possess characteristics significantly different from, the other.

GTT can recover additional damages if it can establish that it is more likely than not that, if there had been no infringement, GTT would have been able to charge higher prices for some of its products. If this fact is established, you may award as additional damages the difference between:

- (A) the amount of profits GTT would have made by selling its product at the higher price, and
- (B) the amount of profits GTT actually made by selling its product at the lower priceGTT actually charged for its product.

This type of damage is referred to as price-erosion damage.

If you find that GTT suffered price erosion, you may also use the higher price in determining GTT's lost profits from sales that were lost because of the infringement. In calculating GTT's total losses from price erosion, you must take into account any drop in sales that would have resulted from charging a higher price.

You may also award as damages the amount of any increase in GTT's costs, such as additional marketing costs, caused by competition from the infringing product.

If you find that GTT has established infringement, GTT is entitled to at least a reasonable royalty to compensate it for that infringement. If you find that GTT has not proved its claim for lost profits, or has proved its claim for lost profits for only a portion of the infringing sales, then you must award GTT a reasonable royalty for all infringing sales for which it has not been awarded lost profits damages.

A royalty is a payment made to a patent holder in exchange for the right to make, use, or sell the claimed invention. A reasonable royalty is the amount of royalty payment that a patent holder and the infringer would have agreed to in a hypothetical negotiation taking place at a time prior to when the infringement first began. In considering this hypothetical negotiation, you should focus on what the expectations of the patent holder and the infringer would have been had they entered into an agreement at that time, and had they acted reasonably in their negotiations. In determining this, you must assume that both parties believed the patent was valid and infringed and the patent holder and infringer were willing to enter into an agreement. The reasonable royalty you determine must be a royalty that would have resulted from the hypothetical negotiation, and not simply a royalty either party would have preferred. Evidence of things that happened after the infringement first began can be considered in evaluating the reasonable royalty only to the extent that the evidence aids in assessing what royalty would have resulted from a hypothetical negotiation. Although evidence of the actual profits an alleged infringer made may be used to determine the anticipated profits at the time of the hypothetical negotiation, the royalty may not be limited or increased based on the actual profits the alleged infringer made.

In determining the reasonable royalty, you should consider all the facts known and available to the parties at the time the infringement began. Some of the kinds of factors that you may consider in making your determination are:

- (1) The royalties received by GTT for the licensing of the '398 patent, proving or tending to prove an established royalty.
- (2) The rates paid for the use of other patents comparable to the '398 patent.
- (3) The nature and scope of the license, as exclusive or nonexclusive, or as restricted or nonrestricted in terms of territory or with respect to whom the manufactured product may be sold.
- (4) GTT's established policy and marketing program to maintain its patent monopoly by not licensing others to use the invention or by granting licenses under special conditions designed to preserve that monopoly.
- (5) The commercial relationship between GTT and Defendants, such as whether they are competitors in the same territory in the same line of business, or whether they are inventor and promoter.
- (6) The effect of selling the patented specialty in promoting sales of other products of the licensee, the existing value of the invention to GTT as a generator of sales of its nonpatented items, and the extent of such derivative or convoyed sales.
- (7) The duration of the patent and the term of the license.
- (8) The established profitability of the product made under the patents, its commercial success, and its current popularity.

- (9) The utility and advantages of the patented property over the old modes or devices, if any, that had been used for working out similar results.
- (10) The nature of the patented invention, the character of the commercial embodiment of it as owned and produced by GTT, and the benefits to those who have used the invention.
- (11) The extent to which Defendants have made use of the invention and any evidence probative of the value of that use.
- (12) The portion of the profit or of the selling price that may be customary in the particular business or in comparable business to allow for the use of the invention or analogous inventions.
- (13) The portion of the realizable profits that should be credited to the invention as distinguished from nonpatented elements, the manufacturing process, business risks, or significant features or improvements added by Defendants.
- (14) The opinion and testimony of qualified experts.
- would have agreed upon (at the time the infringement began) if both had been reasonably and voluntarily trying to reach an agreement; that is, the amount which a prudent licensee—who desired, as a business proposition, to obtain a license to manufacture and sell a particular article embodying the patented invention—would have been willing to pay as a royalty and yet be able to make a reasonable profit and which amount would have been acceptable by a prudent patentee who was willing to grant a license.

No one factor is dispositive and you can and should consider the evidence that has been presented to you in this case on each of these factors. You may also consider any other factors which in your mind would have increased or decreased the royalty Defendants would have been willing to pay and GTT would have been willing to accept, acting as normally prudent business people. The final factor establishes the framework which you should use in determining a reasonable royalty, that is, the payment that would have resulted from a negotiation between GTT and Defendants taking place at a time prior to when the infringement began.

The fact that I have instructed you as to the proper measure of damages should not be considered as intimating any view of mine as to which party is entitled to your verdict in this case. Instructions as to the measure of damages are given for your guidance in the event you should find in favor of a party from the greater weight of the evidence in the case in accordance with the other instructions.

Nothing said in these instructions and nothing in any form of verdict prepared for your convenience is meant to suggest or convey in any way or manner any suggestion or hint as to what verdict I think you should find. What the verdict shall be is your sole and exclusive duty and responsibility.

It is your duty, as jurors, to consult with one another, and to deliberate with a view to reaching an agreement, if you can do so without violence to individual judgment. You must each decide the case for yourself, but only after an impartial consideration of the evidence in the case with your fellow jurors. In the course of your deliberations, do not hesitate to reexamine your own views, and change your opinion, if convinced it is erroneous. But do not surrender your honest conviction as to the weight or effect of evidence, solely because of the opinion of your fellow jurors, or for the mere purpose of returning a verdict.

Remember at all times that you are not partisans. You are judges—judges of the facts. Your sole interest is to seek the truth from the evidence in the case.

Upon retiring to the jury room, you will select one of your number to act as your presiding juror. The presiding juror will preside over your deliberations and will be your spokesperson here in Court. A Special Verdict Form has been prepared for your convenience. You will take this form to the jury room.

(SPECIAL VERDICT FORM READ)

You will note that some of the interrogatories or questions call for a "Yes" or "No" answer. The answer to each question must be the unanimous answer of the jury. Your presiding juror will write the unanimous answer of the jury in the space provided opposite each question. You will note that certain questions do not require a "Yes" or "No" answer, but require you to fill in a dollar amount. As with all other questions, your answer to these questions must be the unanimous answer of the jury.

Your verdict must be based solely on the evidence and on the law which I have given to you in my instructions. Nothing I have said or done is intended to suggest what your verdict should be -- that is entirely for you to decide. You must not permit sympathy, prejudice, or emotion to influence your verdict.

After the jury has answered each of the questions asked, the presiding juror will date and sign the special verdict as so completed, and the jury will then return with it to the courtroom.

If it becomes necessary during your deliberations to communicate with the Court, you may send a note by a court security officer, signed by your presiding juror or by one or more members of the jury. No member of the jury should ever attempt to communicate with the Court by any means other than a signed writing, and the Court will never communicate with any member of the jury on any subject touching the merits of the case otherwise than in writing, or orally here in open Court.

You will note from the oath about to be taken by the court security officers that they too, as well as all other persons, are forbidden to communicate in any way or manner with any member of the jury on any subject touching the merits of the case.

Bear in mind also that you are never to reveal to any person - not even to the Court - how the jury stands, numerically or otherwise, on the questions before you, until after you have reached a unanimous verdict.

Your duty is to both the Plaintiff and the Defendants. They each have a right to expect that you will see that justice is done. Your responsibility should be borne courageously and without fear or favor. It is not an arbitrary power, but one that must be exercised with fairness, sincere judgment and sound discretion.

The final test of the quality of your service will lie in the verdict you return to the Court, not in the opinions any of you hold as you retire from the case. Remember, you are not partisans nor advocates but triers of fact.